



NAVSARI AGRICULTURAL UNIVERSITY

**NAVSARI AGRICULTURAL UNIVERSITY**

**નવસારી કૃષિ વિશ્વવિદ્યાલય**



**Year : 2021-2022**

**Office Of The Comptroller**

**Department Of Information Technology**

**Navsari Agricultural University**

**Navsari-396450**

# Activities & Services provided by IT Department for Hardware & Networking Work



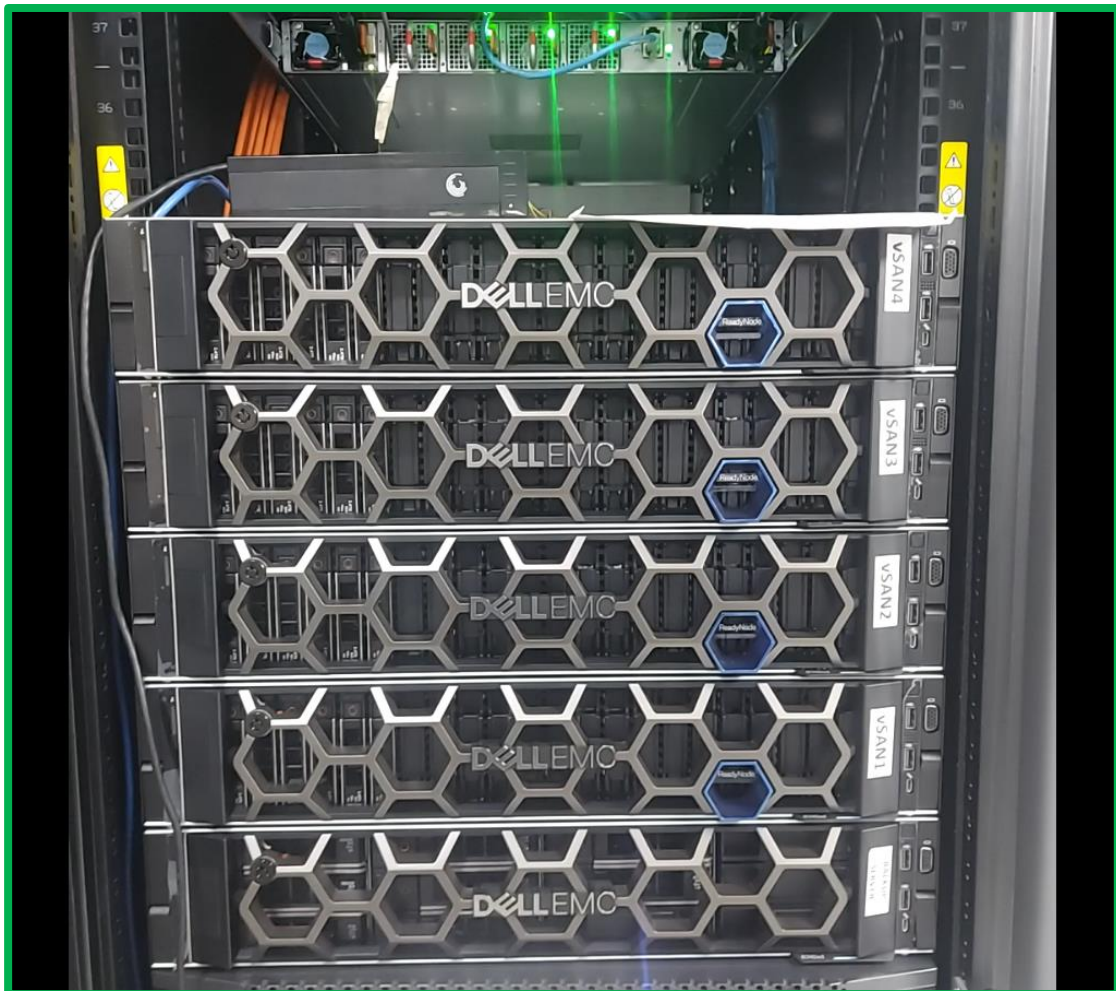
**Office of The Comptroller**  
**Department Of Information Technology**  
**Navsari Agricultural University**  
**Navsari-396450**



# Activities & Services provided by IT Department for Hardware & Networking Work

## 1. HCI (Hyper-Convergence Infrastructure) based Servers

IT Department NAU has procured and deployed Hyperconverged infrastructure (HCI) at NAU. It contains 4nos. Vsan Ready highly capable servers and 01 No Vsan Ready Backup server. All the new servers will be hosting upcoming new online services and will work as the backbone of all the NAU Online Services in near future. All the new and upcoming online services of the NAU will be hosted in the house through HCI servers.



## 2. Long Range P2P Wi-Fi Connectivity to Remote Centers of NAU

NAU's IT department has deployed wireless devices to establish direct P2P connectivity from the Navsari Server Room. Eleven towers have been established at various remote station locations in this regard. All of the towers are self-contained. Wireless links between NAU's distant stations are provided by all of the towers. The link will come directly from the Navsari location. The New Towers are located in Navsari and NAU distant areas DantiUbhrat, Surat, Hansot, Tanchaa, Achaalia, Bharuch, Bardoli, Vyara, Gandevi, and Paria. These towers will provide Internet and NAU's various online intranet services directly from the Navsari location, using appropriate wireless technology.

## 3. Internet Leased Line and IPsec VPN Services

Navsari Agriculture University has procured a dedicated 1:1 200 Mbps leased line and IPsec VPN Connectivity across the University. The IPsec VPN connectivity connects remote centers of Dediapada, Bharuch, Paria and Waghai.

IT department has also upgraded the NKN leased line with a bandwidth of 1 Gbps and providing a speed of approximately 100 Mbps. The IP Department is merging the Internet of both Bandwidth and providing internet services to Navsari Campus and Remote centers through IPsec VPN connecting It connects the remote center with a single Network of NAU.



#### **4. Fiber Optic Connectivity**

The Navsari Campus is approximate new Approx. 5 Km of Overhead Fiber Optic Cable based connectivity has been established in Ring Topology. The Fiber will pave high-speed connectivity across the Navsari Campus and pave the way for excellent information speed for the online service and internet across the Navsari Campus. This development works pavs for the major network infrastructure push for the NAU. All the Offices of Navsari Campus have been connected with high-speed Fiber Optics Connectivity. All the offices, Units and Hostels are connected with high-speed fiber optic connectivity in Navsari Campus at Present.

#### **5. SSL (Secure Socket Layer) enabled NAU Online Services**

Secure sockets layer (SSL) authentication is a protocol for establishing a secured communication channel for communication between a client and a server. SSL authentication secures the communication by encrypting it while it is in transit. The IT department has Procured and deployed SSL (Secure Socket Layer) Certificates for all the Online Services of NAU and the university website [www.nau.in](http://www.nau.in). An SSL (secure sockets layer) certificate is a digital certificate that both authenticates the identity of a website and encrypts sensitive information so that any passwords, addresses or credit card numbers cannot be intercepted or read by anyone other than the intended recipient. At Present all the IT Department online services are SSL based on providing security for online services of the NAU.

#### **6. Advanced Firewall for NAU Network**

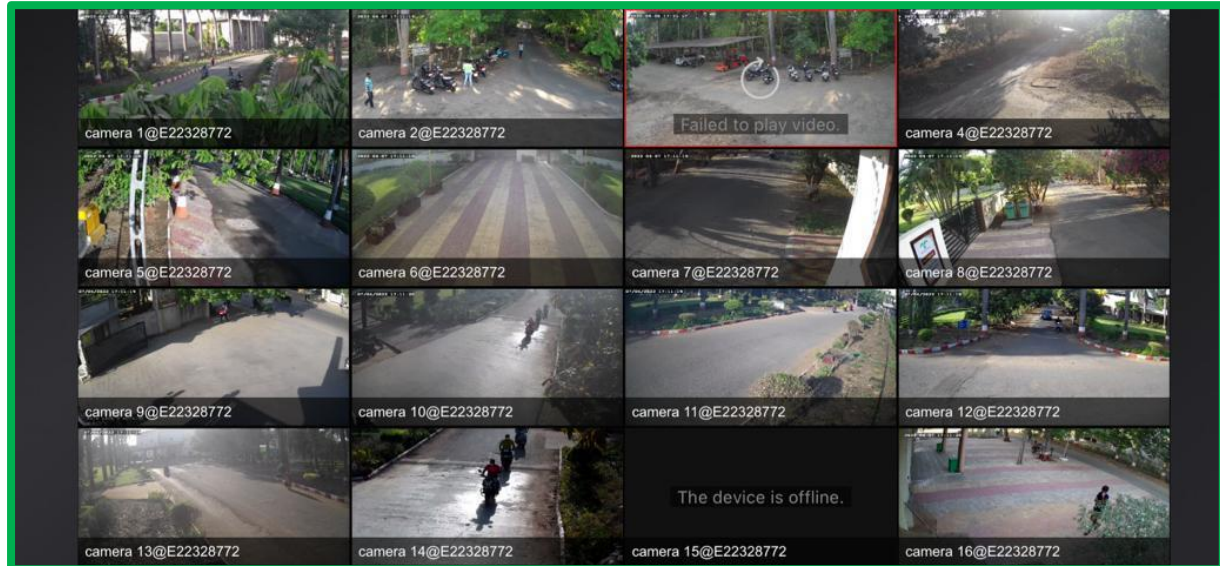
A Firewall is a network security device that monitors and filters incoming and outgoing network traffic based on an organization's established security policies. At its most basic, a firewall is essentially the barrier that sits between a private internal network and the public Internet. A firewall's main purpose is to allow non-threatening traffic in and to keep dangerous traffic out. The Department of Information Technology has procured a SOPHOS XG310 firewall for safeguarding the NAU network, Servers and Network Management. NAU is having 3 years Firewall subscription at present safeguarding NAU network and Servers from unauthorized intrusions safeguarding IT Servers and NAU networks.

#### **7. Seqrite End Point for Online Servers**

IT networks while being one of the most robust and complicated are also the most vulnerable to server attacks. End Point Protection of servers is a comprehensive IT security is the necessity of solution built keeping large organization servers in mind. IT Department NAU has procured and Deployed Seqrite Endpoint Protection for the Servers and the different computers of the IT Department for Security purposes.

## 8. CCTV Network across University Area

IT Cell NAU is administering and monitoring CCTV Network System across the University roads and main gates with NVR & DVR administration. It is been administered by the IT Cell NAU.





# Activities & Services provided by IT Department for Administration Works



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# Activities & Services provided by IT Department for Administration Works

## 1. NAU SSO Portal.

IT Cell NAU has introduced SSO (Single Sign-On) based system for login into various online services provided by the IT Cell. All the SSO users are no longer required to remember the passwords for different online services. All the NAU online Services are available through SSO only. The IT department has also customized the SSO (Single Sign-On) Services for the different IT Services of NAU. It has made customization as per the feedback received from various stakeholders of the NAU. This customization has made SSO more effective and Stable.



## 2. NAU Voice SMS Services

IT department NAU has procured and deployed Voice SMS service for the NAU. Voice SMS service has recently started to gain popularity. It is a form of verbal communication which is automated. It works as either recorded audio or text to speech format. There are many benefits of using a voice SMS for the University's extension activities of NAU.

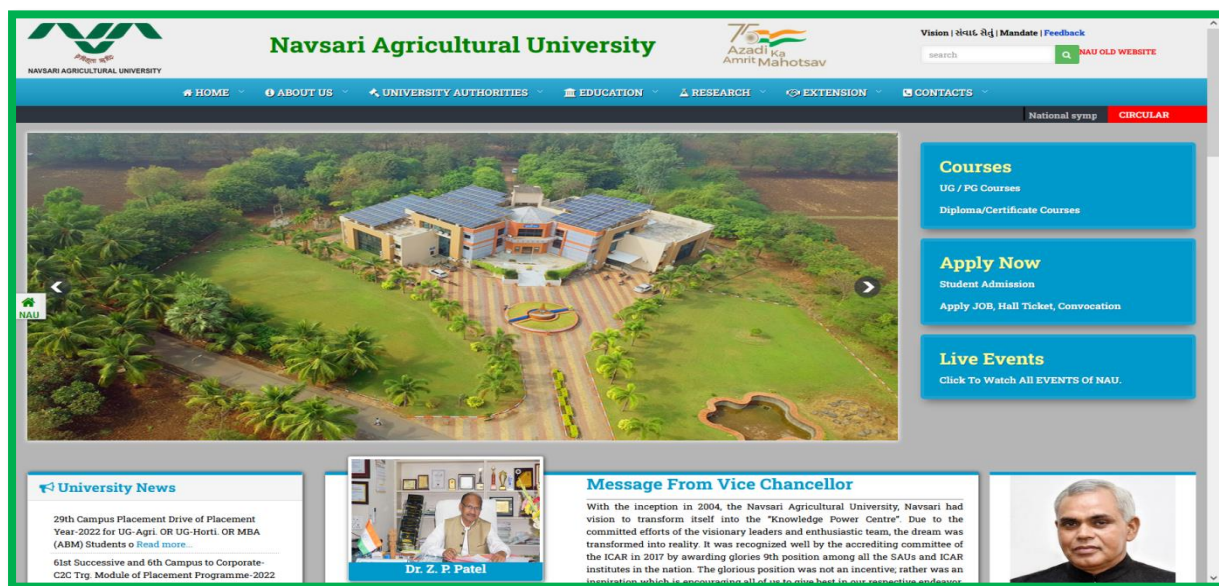
## 3. E-tender Services.

IT Cell NAU Provides support for E-Tendering Procurements for Various Units of the NAU as per their requests. In this regard, N-procure E-token has been procured from GNFC N code Solutions and it is in use for the E-Tendering Processes of the University.



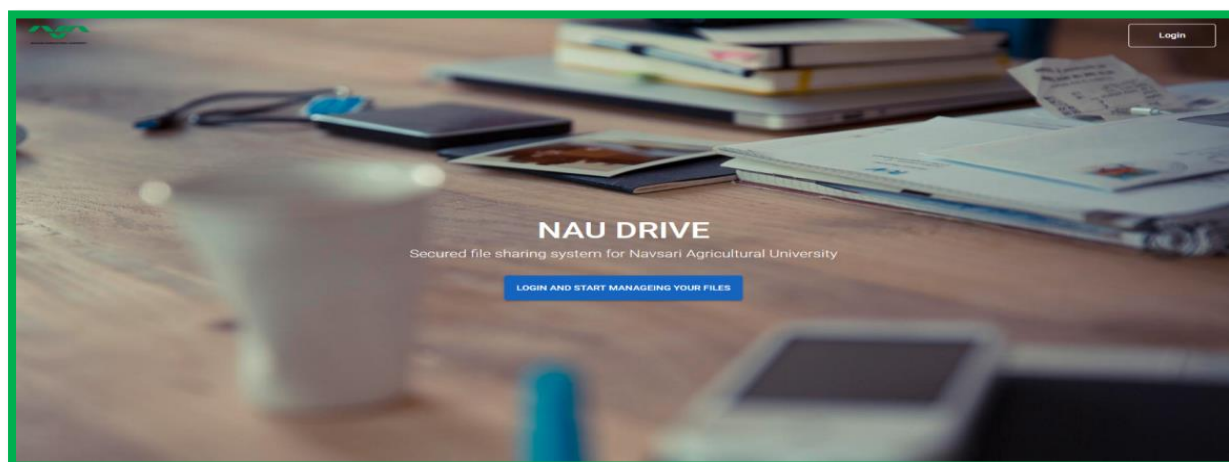
#### 4. CMS based University website management.

This website is developed keeping in mind the decentralization approach for managing the website. This approach enables each unit to manage their web page on their own by appointing a web admin who can update web site through SSO login only. The Regular maintenance and Backup and web hosting activity are carried out by the IT Cell. NAU.IN website contains all the information about NAU and its services but is not limited to it. IT cell NAU is maintaining and managing Old Nau.in the website and new nau.in University website.



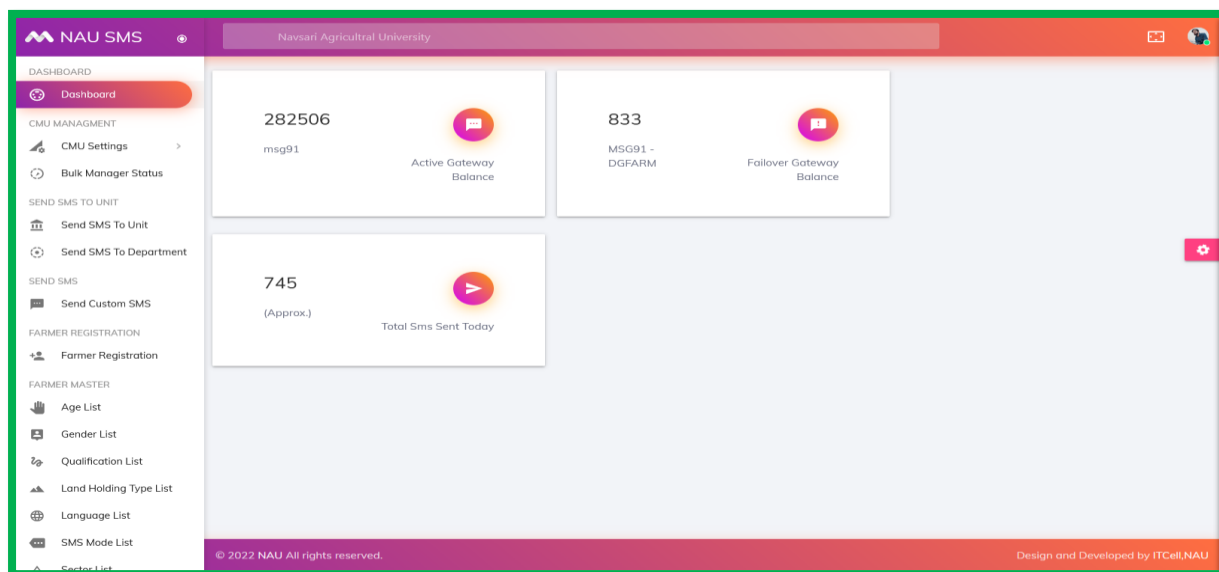
#### 5. NAU Drive Portal.

The IT Cell NAU has deployed NAU Drive Portal for the University. This NAU Drive Portal serves the purpose of inhouse Data storage purpose for the University in a secure and effective manner.



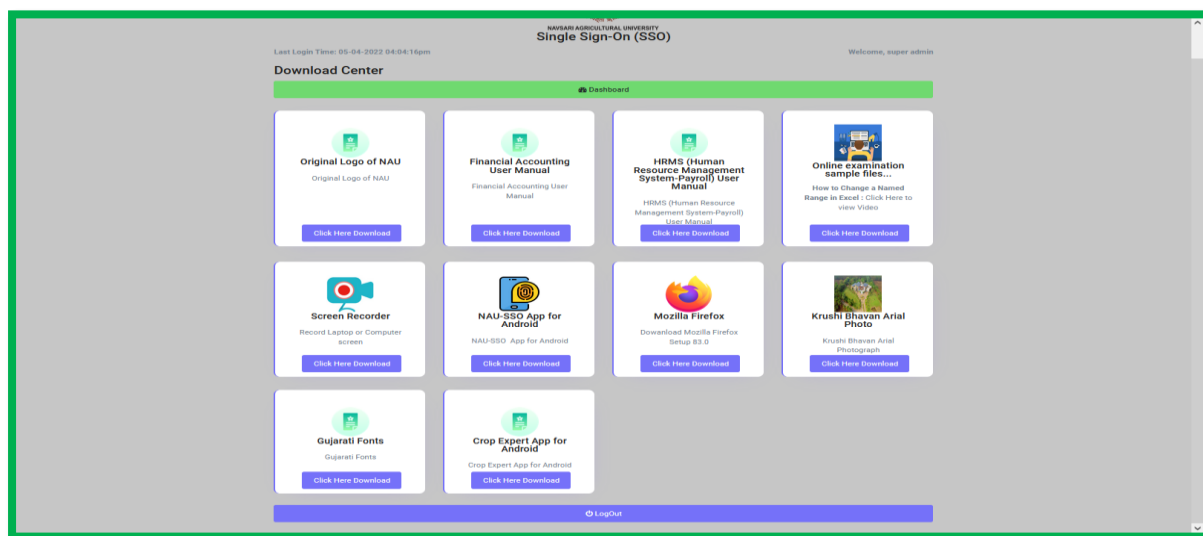
## 6. SMS portal with API Integration support.

The IT cell NAU has procured 4.5 million transaction SMS with API integration support for the various online services of NAU. This SMS is used for the Online Services OTP and various notifications to NAU students and staff as per the instructions given by the University Authorities. NAU's IT department also runs an SMS Portal for the school, which allows students and staff to get important messages by text message. This is a service run by the department. This SMS was sent as per the request received from different units.



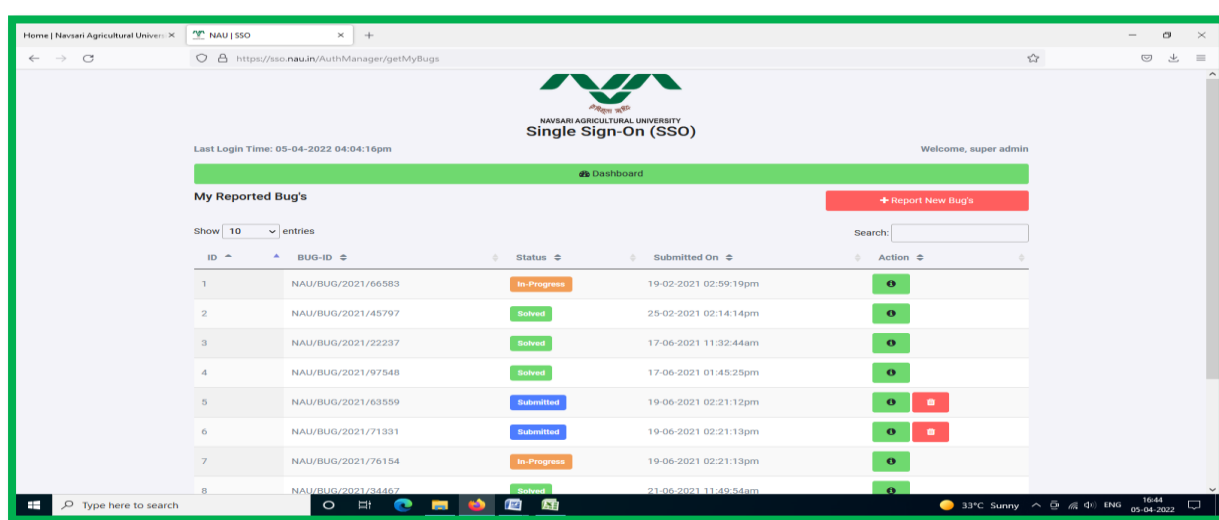
## 7. Download Center.

The Download Centers of the NAU provide various software, User Manuals, University Logos and Important freeware software for use in the Network. Users can download the user manuals, NAU LOGO, SSO APP for android and many more.



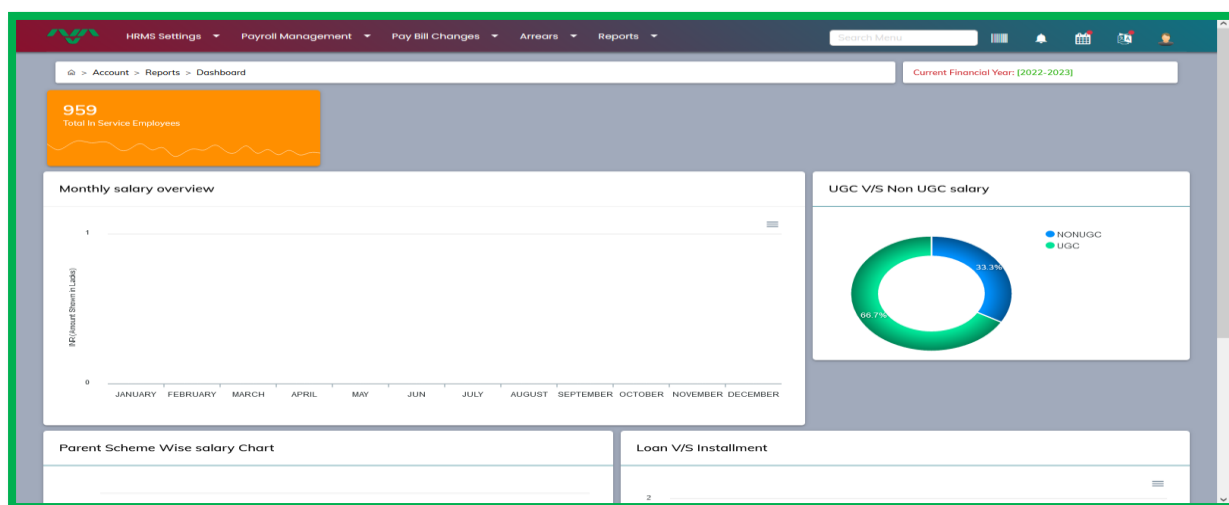
## 8. Bug Management Portal.

IT Cell NAU has deployed bug management and reporting through online bug reporting from their SSO Login. Any NAU SSO user if they find any issues in NAU online services they can report a bug to IT Cell in online mode after logging in from the SSO Login system. This system has been developed in Open-Source Technologies. Online Bug Reporting system helps you automate the capture, analysis, assignment, and resolution of bugs. It also saves you time by allowing you to maintain a single source of information on bugs, which includes everything from the number of bugs detected, who fixed the bug, and how long it took them. This Bug Management Portal aims for registering a Bug/error report for each NAU's Software/applications/portals to smooth the work of the software.



## 9. Human Resource Management Portal.

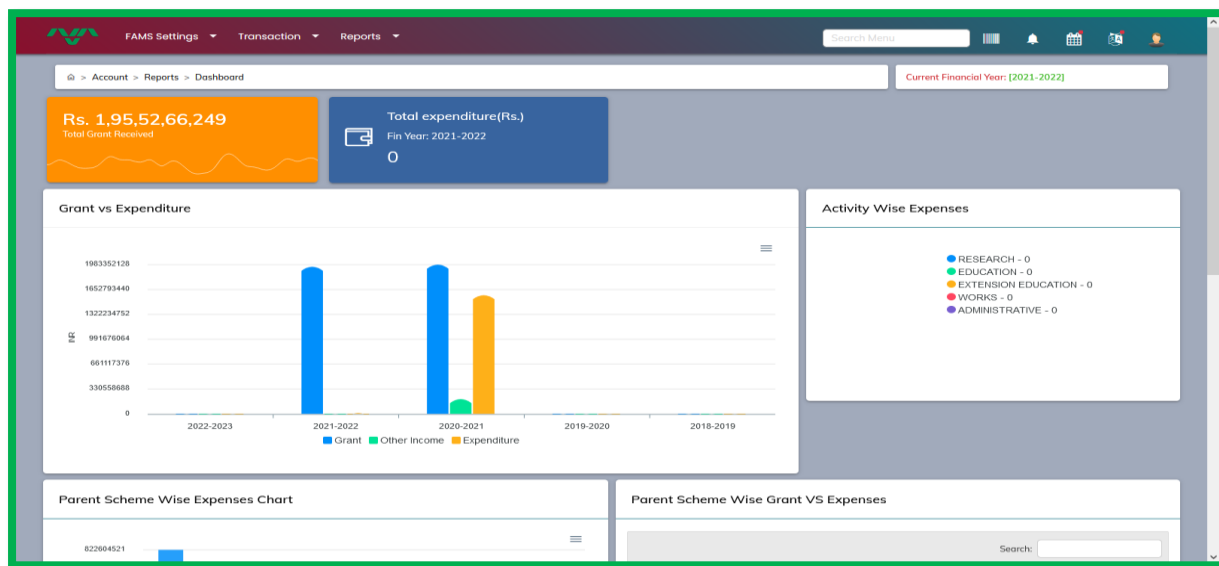
IT Cell of NAU provides a Human Resource Management Portal for different forms of online pay bills, as well as arrear bills for each NAU Office/Unit/Sub Unit, allowing them to submit various sorts of online pay bills.





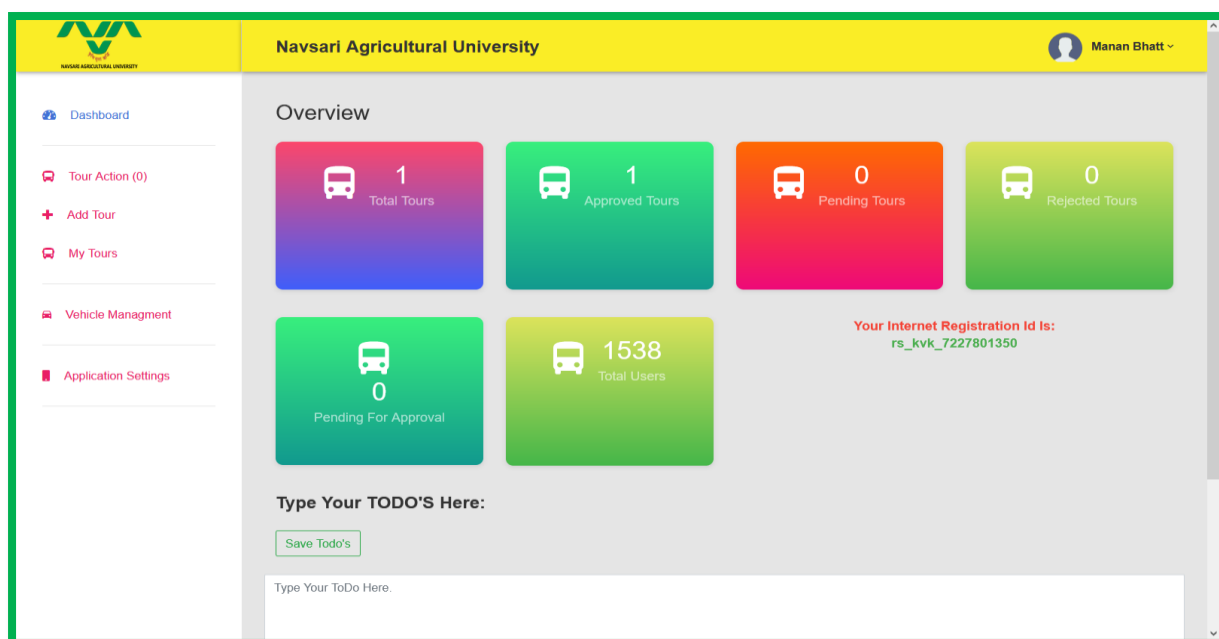
## 10. Online Financial Accounting Management System Portal.

IT Cell NAU also provides an Online Financial Accounting Portal for different types of DC Bill, pension bills, income & receipt, expenditures for each NAU Office/Unit/Sub Unit to submit different types of pay bills online.



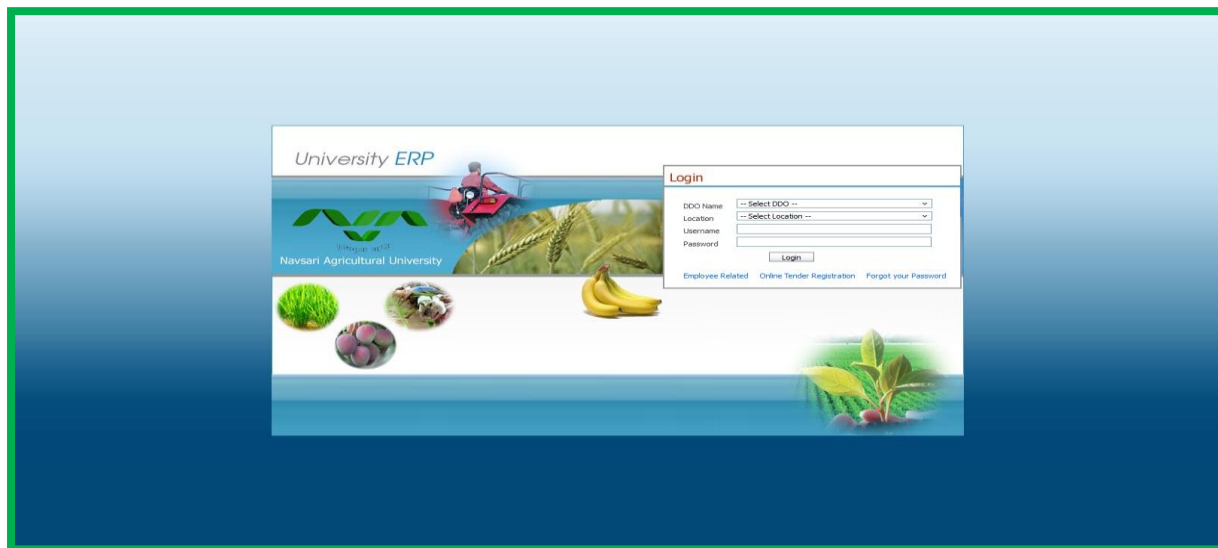
## 11. NAU Tour Management Portal.

The IT cell has also developed online Tour Management Approval System. This Tour Management Approval System works as per the NAU Statue Approvals. It is a step towards effective E-governance of the University. NAU Tour Management Portal for different types of online tours, and track the tour for each NAU Office/Unit/Sub Unit/User.



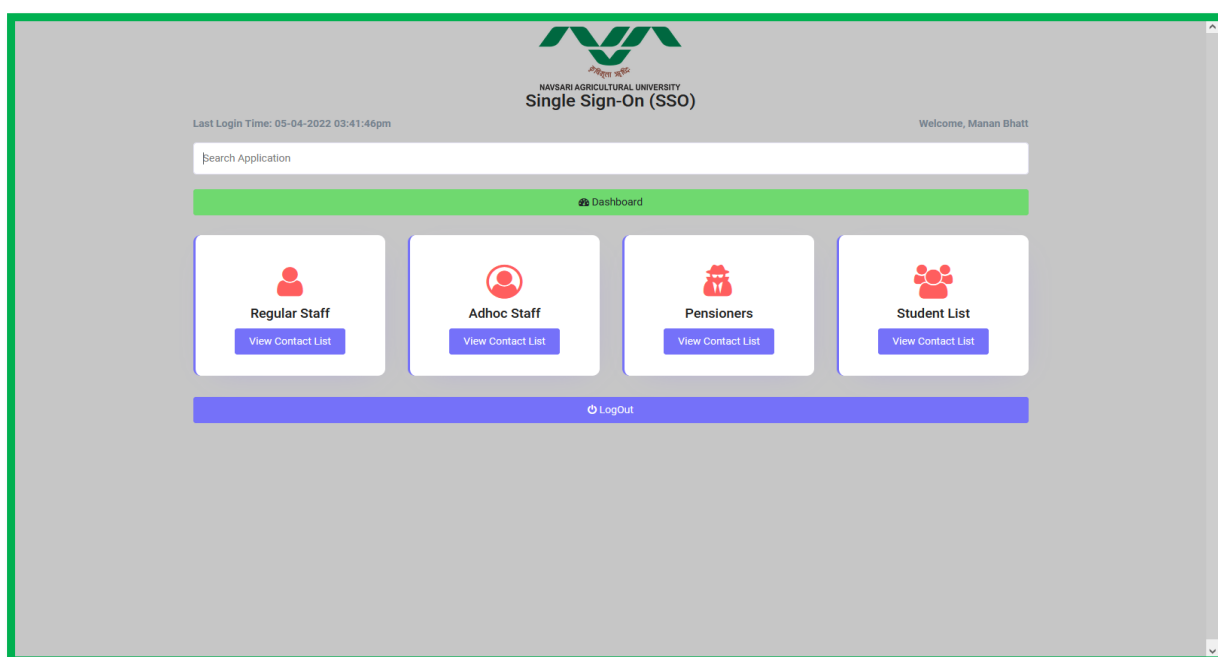
## 12. NAU University ERP Software.

IT Cell NAU also provides an Enterprise Resource Planning Portal for different activities of daily administrative works like DC Bill, pension bill, income, and expenditure.



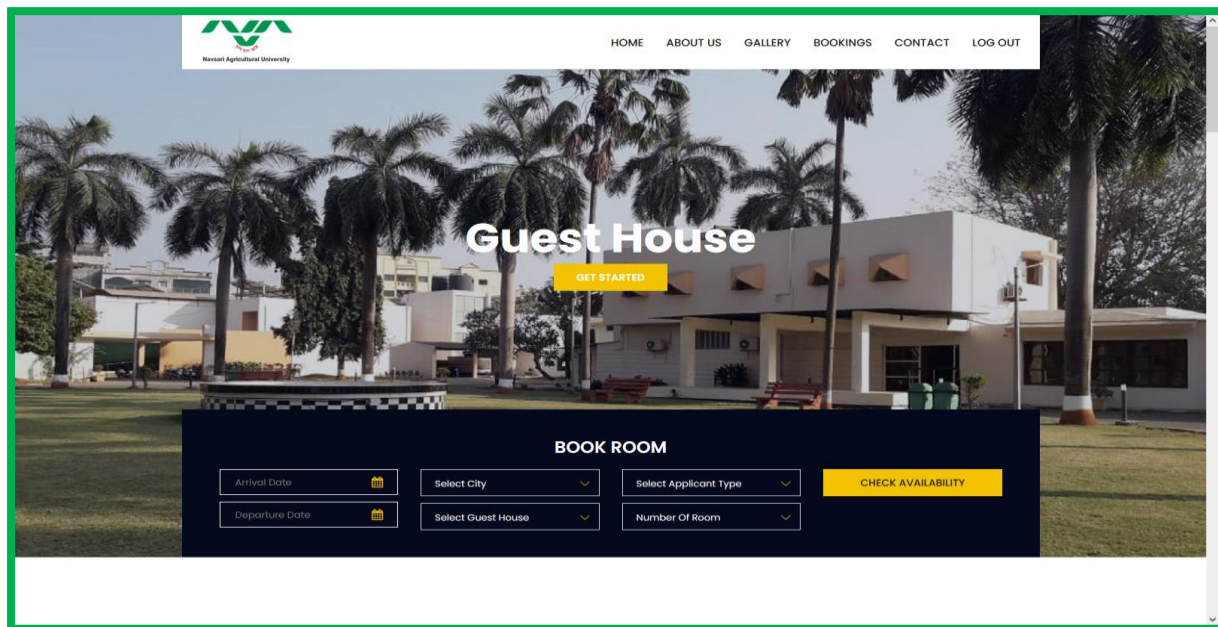
## 13. NAU Sampark Setu

IT Cell NAU has also started a new service NAU Contact Directory. It can be accessed through SSO Portal. All the users of NAU SSO can avail of this service after login in through SSO. All the users can get the contact details of NAU students and staff easily through this portal. Contact System for easily get the contact for Regular Staff, Adhoc Staff, Pensioners and Students along with the Name, Email, Mobile, Designation, Department.



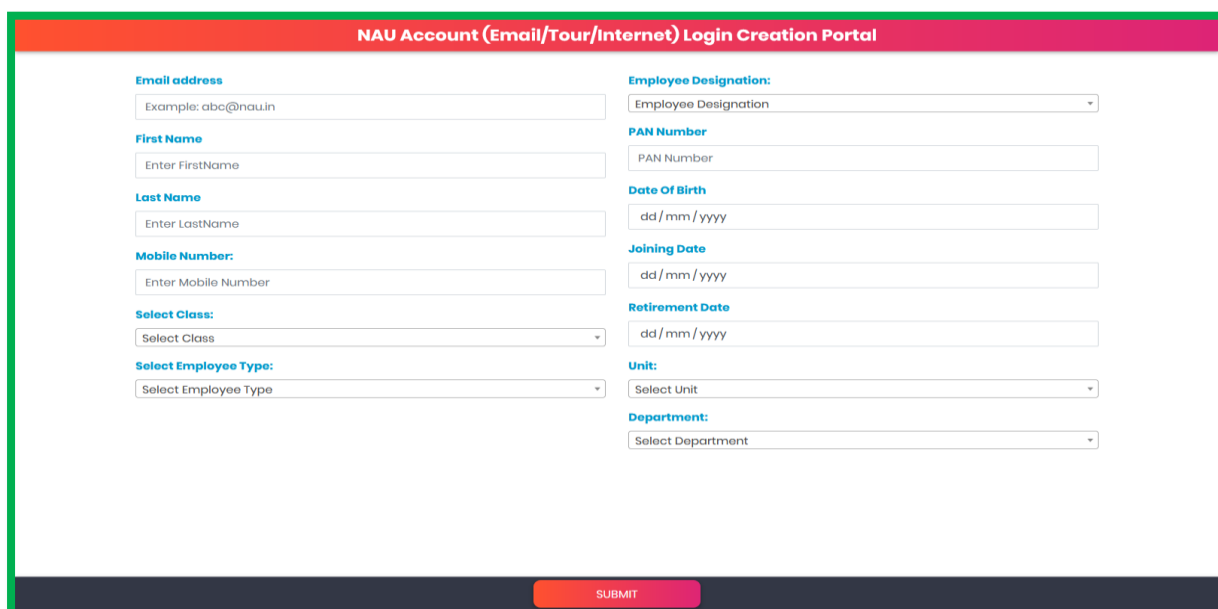
#### 14. NAU Online Guest House room booking Management portal.

IT Cell is a Contact System that easily managing the Online Guest House Booking Management facility for the University. This Online service facility is managed, maintained and hosted by the IT cell at Inhouse server hosting facility.



#### 15. NAU Webmail Service.

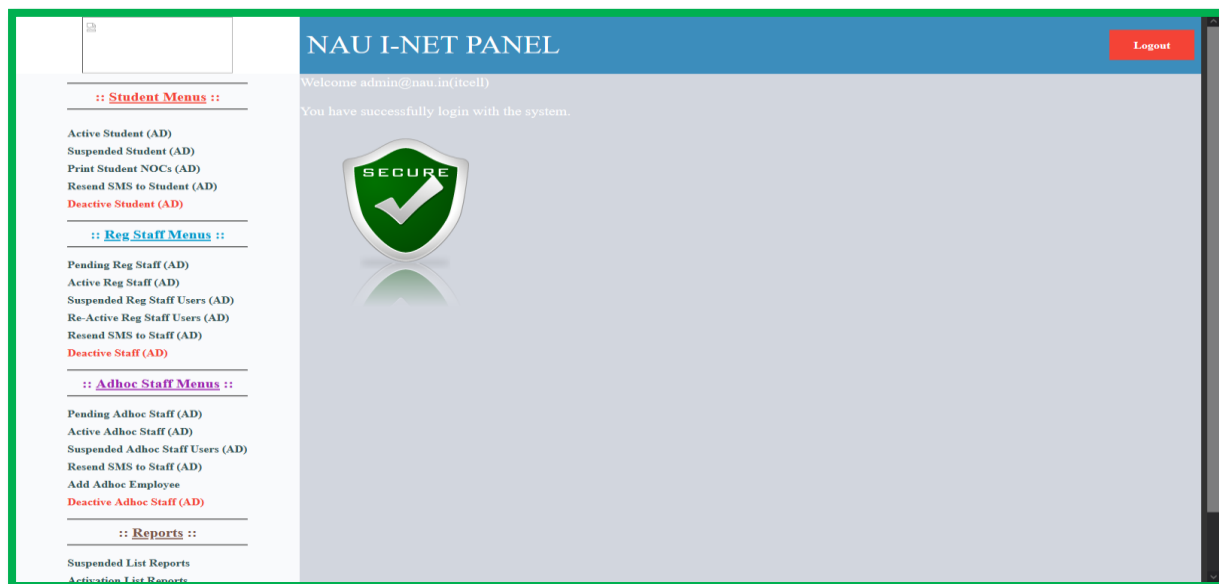
IT Cell NAU is providing webmail services to all employees of the university. This web mail service is based on the nau.in the domain. This facility is also going to start for registered NAU students in near future.





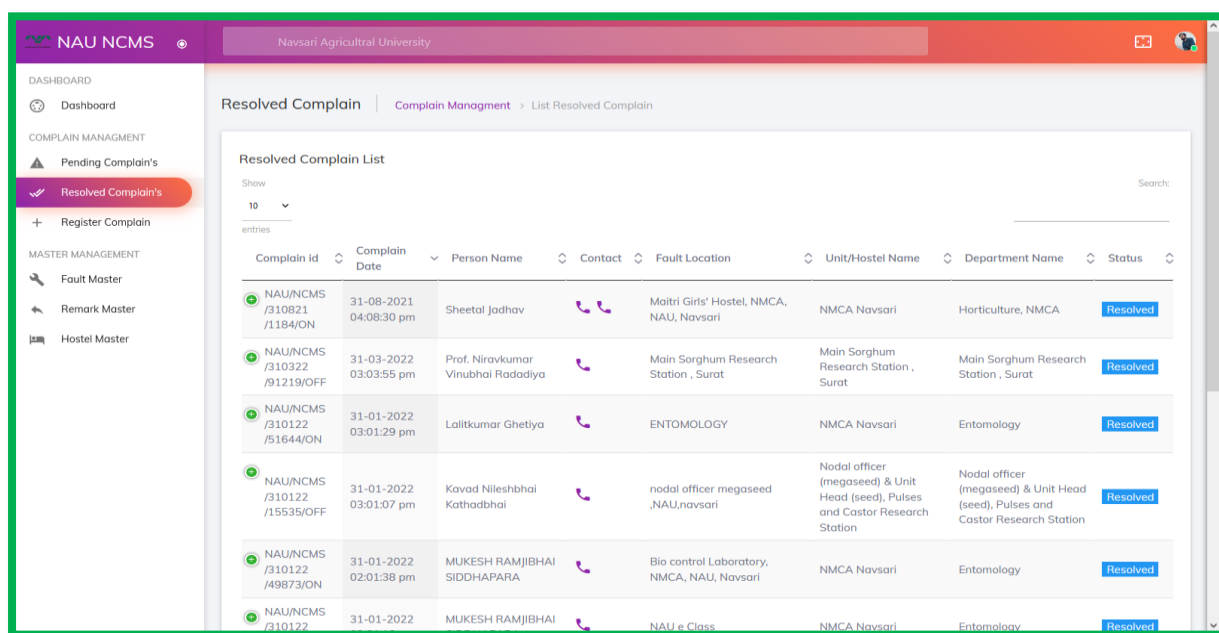
## 16. Internet User Management portal.

IT Cell NAU provide The Internet Users Management System of the university takes care of Adhoc staff / regular staff and student internet registration also student can generate no due certificate of IT services. This Service is administered by the IT cell only for the administration of Internet user accounts for staff and students.



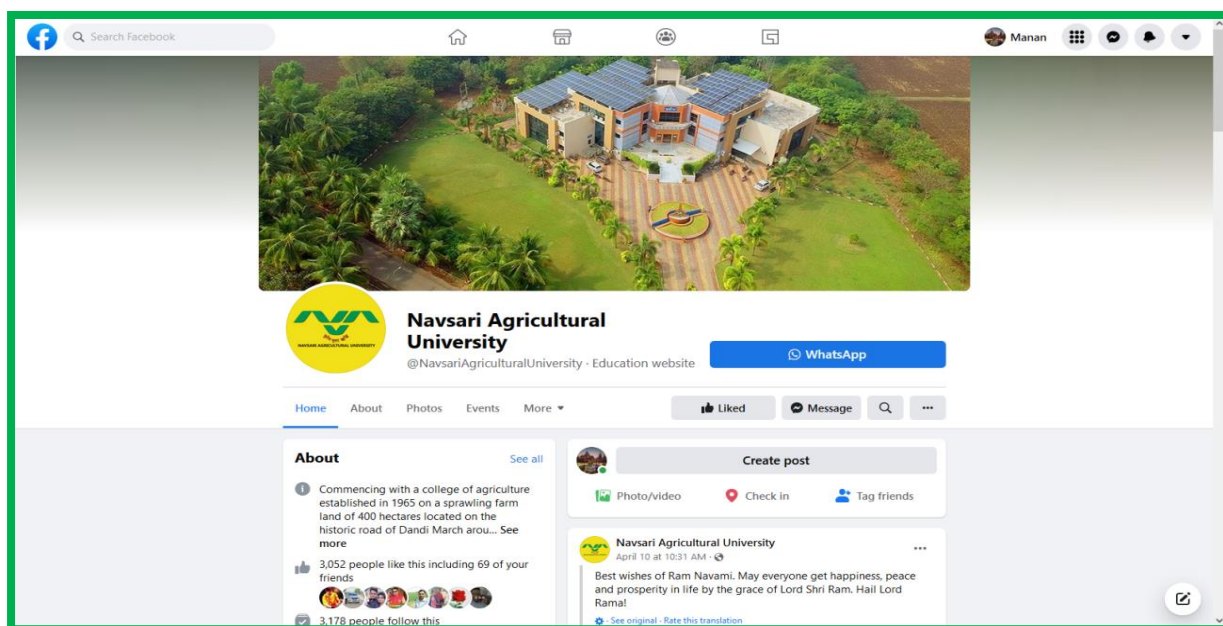
## 17. Network Complaint Management System.

IT Cell NAU is managing online complaint management software for Register/Manage University Internet Complaint for Internet and Networking Issues across the University. It is been managed by the IT Cell NAU.

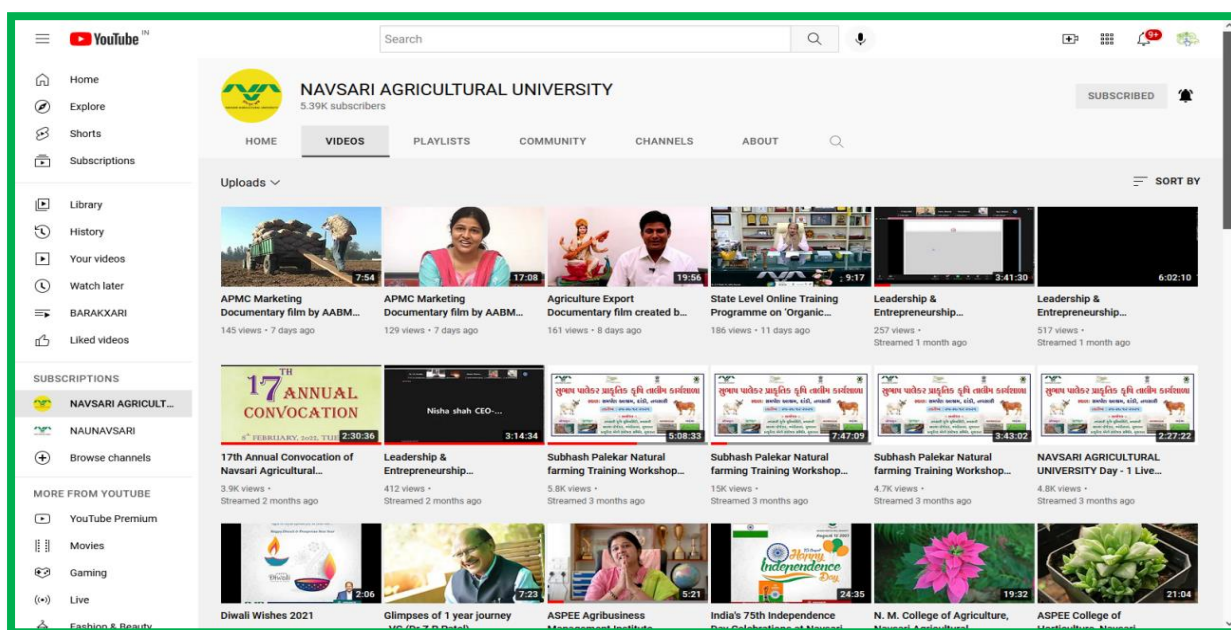


## 18. Social Media Platform.

IT Cell NAU has created an NAU Facebook page for activities and programme's information can view by anyone at any time anywhere.



IT Cell NAU has created an NAU YouTube channel that helps farmers to get valuable Agriculture information. Video on the important topic of agriculture is created by NAU Scientist, that video is uploaded to YouTube channel by IT Cell and helps farmers to receive that valuable information at any time anywhere. This channel also provides live streaming of various events like annual convocation and important events of the university.



## **19. Present IT Development Initiatives of NAU.**

- ❖ Pension Module
- ❖ GPF Module
- ❖ Resolution (Portal) Module
- ❖ Krishi KIOSK 2.0 Portal
- ❖ Budgeting Module
- ❖ Digital Identity Card for NAU Employees (RFID based)
- ❖ Online Asset Management System
- ❖ Cashbook Management software
- ❖ Online Fees and University Income Management software
- ❖ Online Payment Management Systems
- ❖ Online Auditing Management system



# Activities & Services provided by IT Department for Education Work



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# Activities & Services provided by IT Department for Education Works

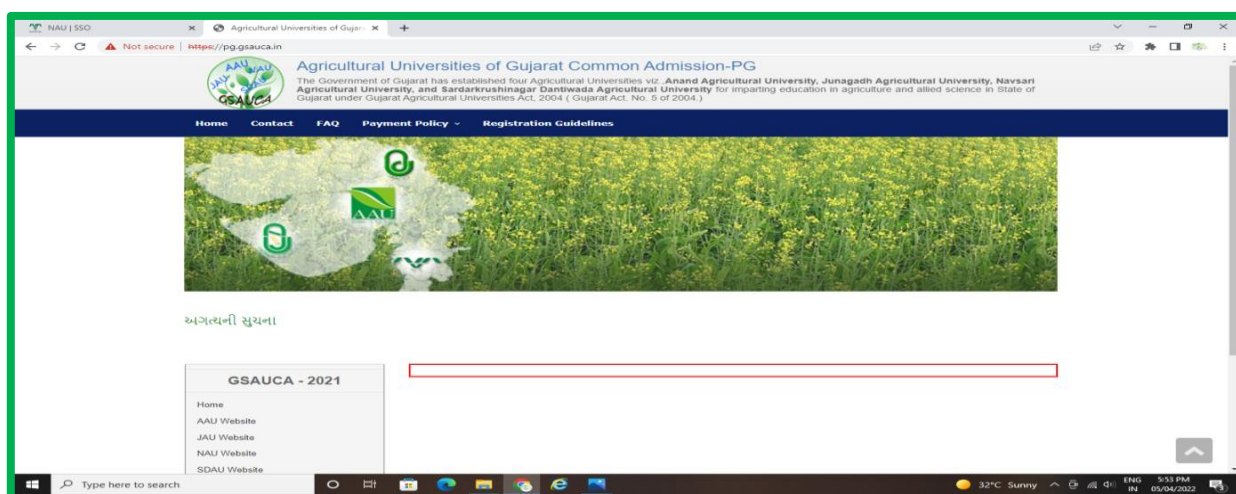
## 1. NAU Online Student Joining Report System

IT Cell NAU has deployed the Digital Student Joining Report since 2021 for storing and managing all the required details of students. This facility is intended to ease the student joining related all tasks in automated manner.



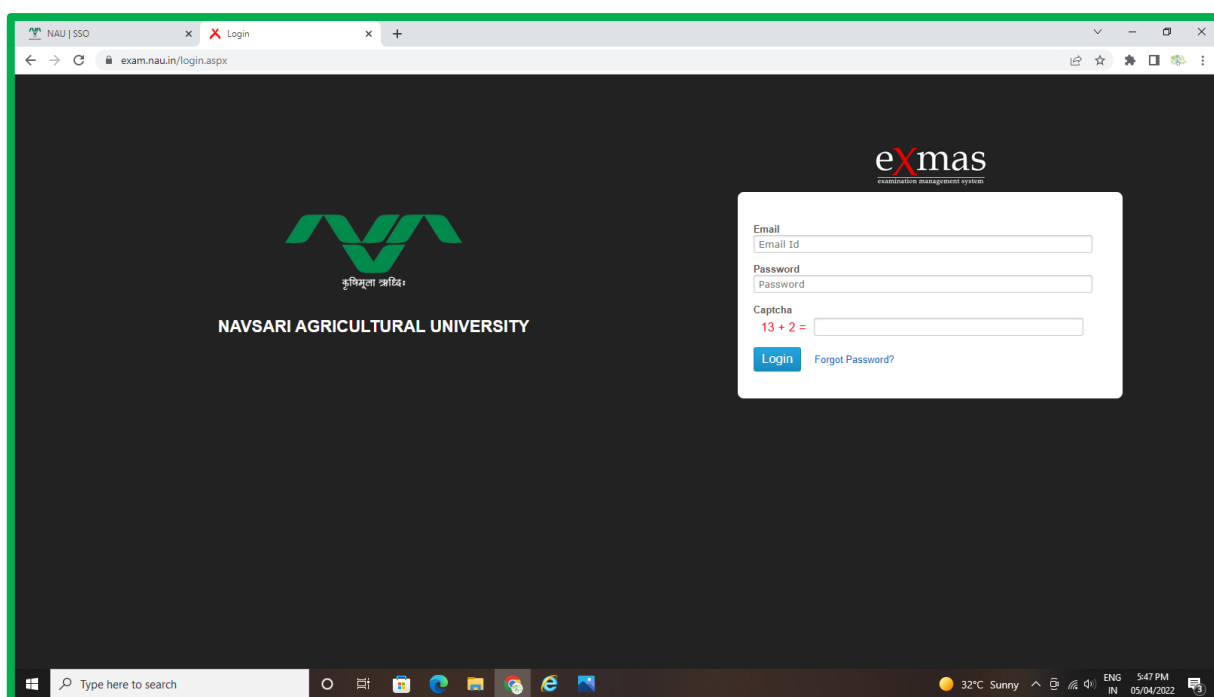
## 2. Online PG Admission Portal for SAU's

Navsari Agriculture University has developed the Post Graduate Admission Portal since 2017 for student's common admission process done across SAUs of Gujarat. This portal is effectively maintained and managed by the IT Cell. This Online service is hosted in house at IT cell Server Room.



### 3. NAU Online Exam Mark Entry System

IT department NAU has developed web enabled exam mark entry software since 2014 for management of all the various academic activities of the university. This Online software provides services for Online Mark Entry. It provides fast and efficient result generation of exams conducted by each college. It increases the overall system's efficiency by eliminating the time and effort required for manual tasks. This online software facilitates the entry of marks online. It facilitates the rapid and accurate generation of results for exams administered by individual colleges.

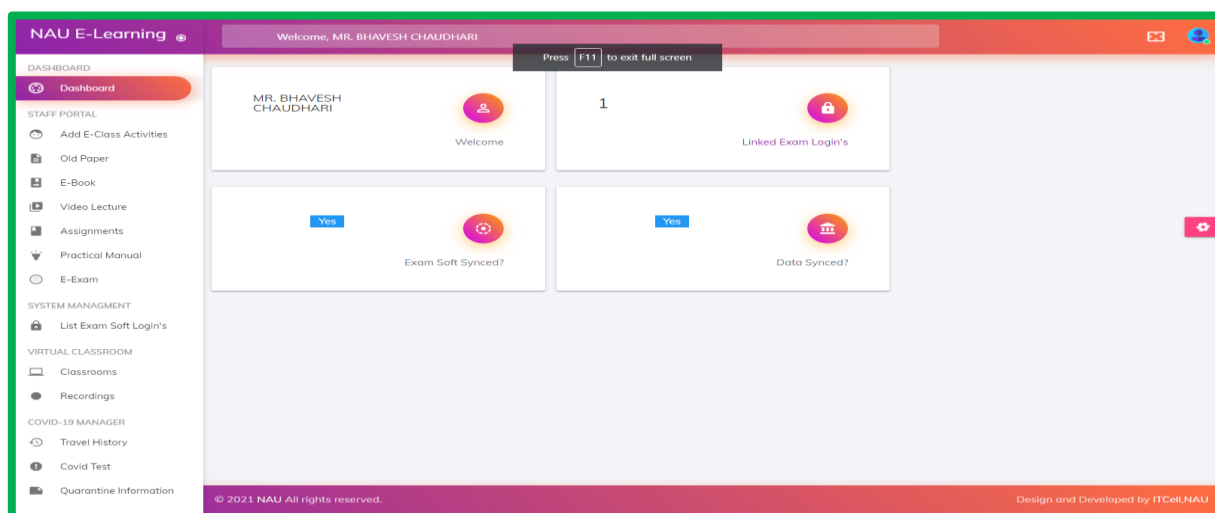


### 4. E-class Portal.

Navsari Agricultural University, Navsari has deployed its own developed platform for the Online E-classes for the benefits of students and faculties in June 2019. Due to Present COVID-19 situation, the University has adopted the own developed NAU E-class platform for the University. Different features have been added till date. The Distinguished features of the NAU E-class facility is given below. More than 10,000 sessions have already been conducted via the NAU e-Class portal.

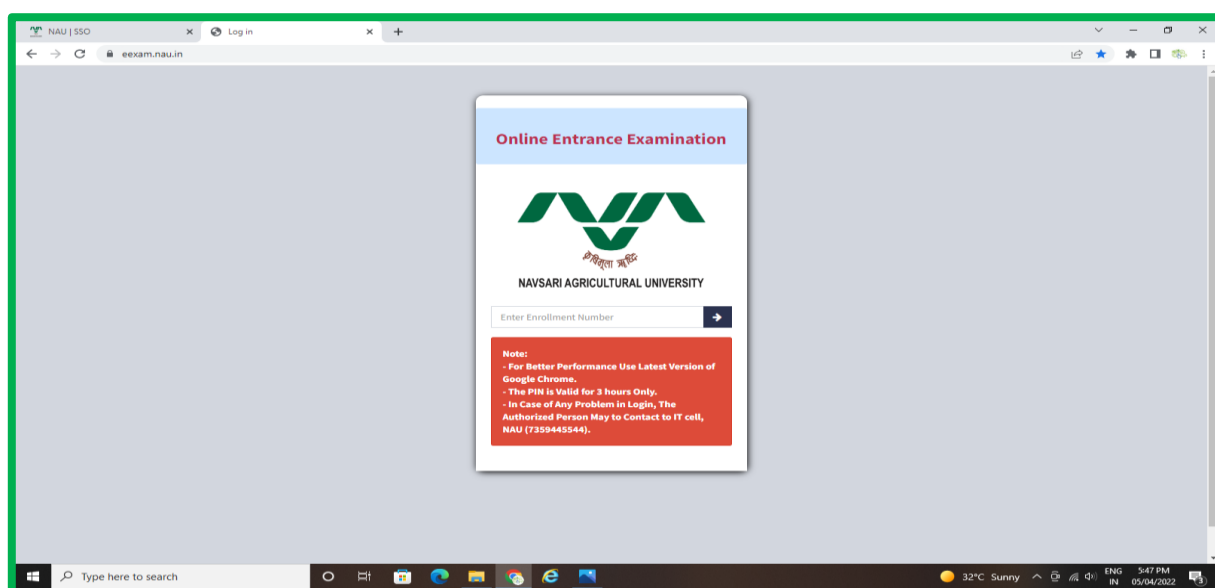


- ❖ E-classes through audio and video modes.
- ❖ Only Registered students can participate in the Classroom.
- ❖ OTP based login for Faculties and Students for Secure Login.
- ❖ The subject wise class rooms are mapped for the faculties.
- ❖ Facility to share subject wise Video Lecture, Assignment, Old Question Papers, Practical Manual among the Students.



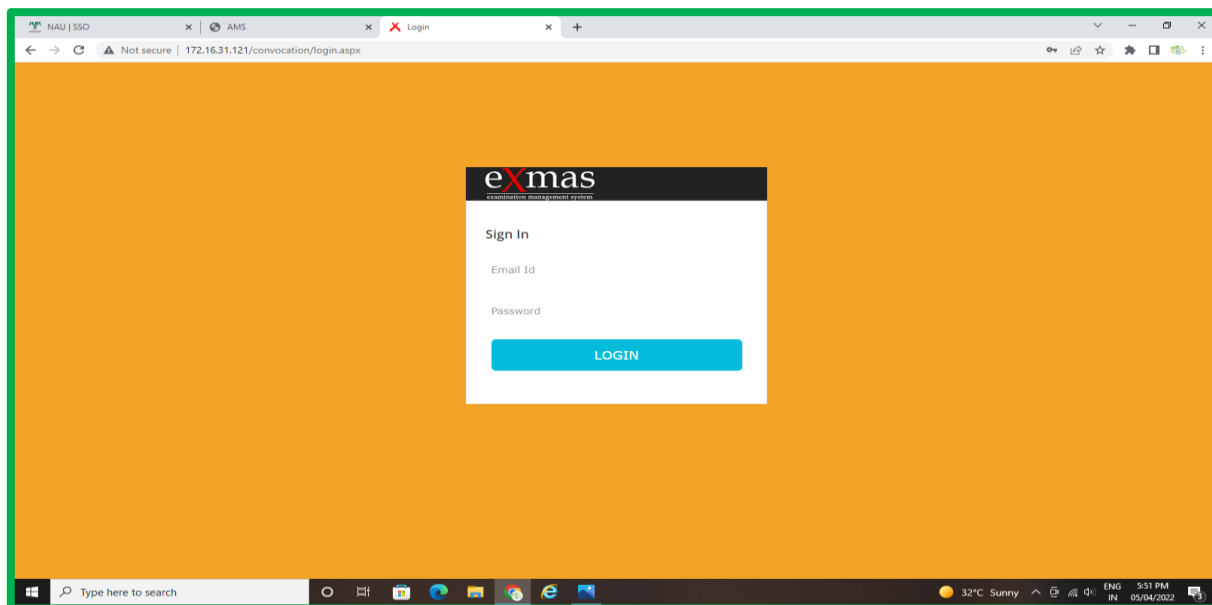
## 5. NAU Online Examination system (MCQ Based).

IT Cell NAU has deployed the online examination system since 2017 for conducting online exams of students. This Platform is used for taking online exams for each college or university whenever it is required. This Facility proved its robustness during the COVID-19 period. All the NAU colleges have used this facility for conducting online exams.



## 6. Convocation Portal.

IT Cell NAU has deployed the convocation portal system since 2018 for passing out students for applying for a degree certificate. This Service is used for registering students for Annual convocation for the university.



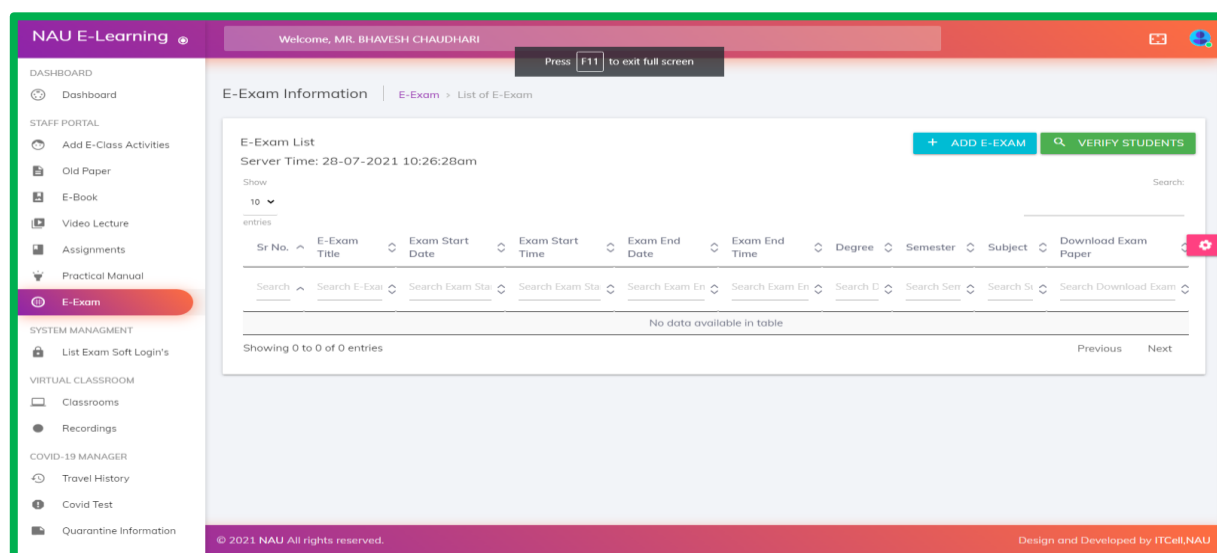
## 7. NAU Dean PG-Module.

IT department NAU has developed the Dean PG-Module since 2021 for the PG student's online Campus form, Synopsis form, Prelim Proposal form, Prelim result, Thesis proposal form, Thesis viva form for tracking and managing the post graduate student's activities.



## 8. Online subjective and descriptive examination portal.

Navsari Agricultural University, Navsari has deployed a module for descriptive Examination for online descriptive examination. It helps in taking descriptive Examination in NAU's own platform of E-class instead of other platforms. It is highly secure and customized as per the special requirements of NAU.



## 9. NAU Live Streaming Activities.

IT Department NAU is managing Live stream Activities for the various functions of the NAU through YouTube channel "NAVSARI AGRICULTURAL UNIVERSITY" presently it is having 5.3K subscribers. IT department has live streamed Annual Convocation of NAU, Various online symposium, Webinars, International Yoga Day Celebration as per the request received from the university.



# Activities & Services provided by IT Department for Extension Education Works



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# Activities & Services provided by IT Department for Extension Education Works

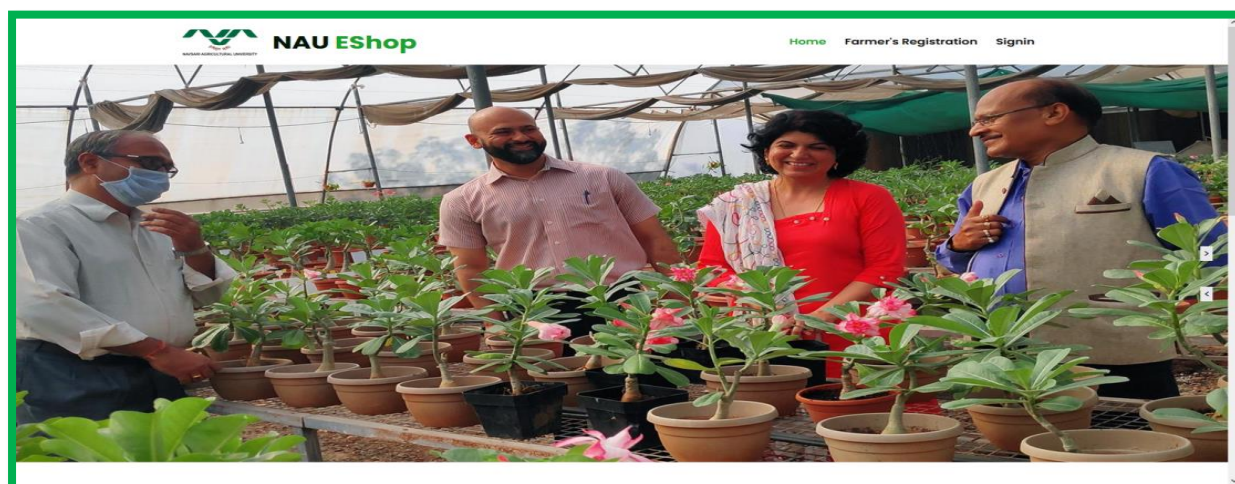
## 1. Paddy Expert System.

NAU's Information Technology Cell is managing and maintaining an online Paddy Expert System established with the assistance of the Department of Extension Education, NMCA, Navsari.



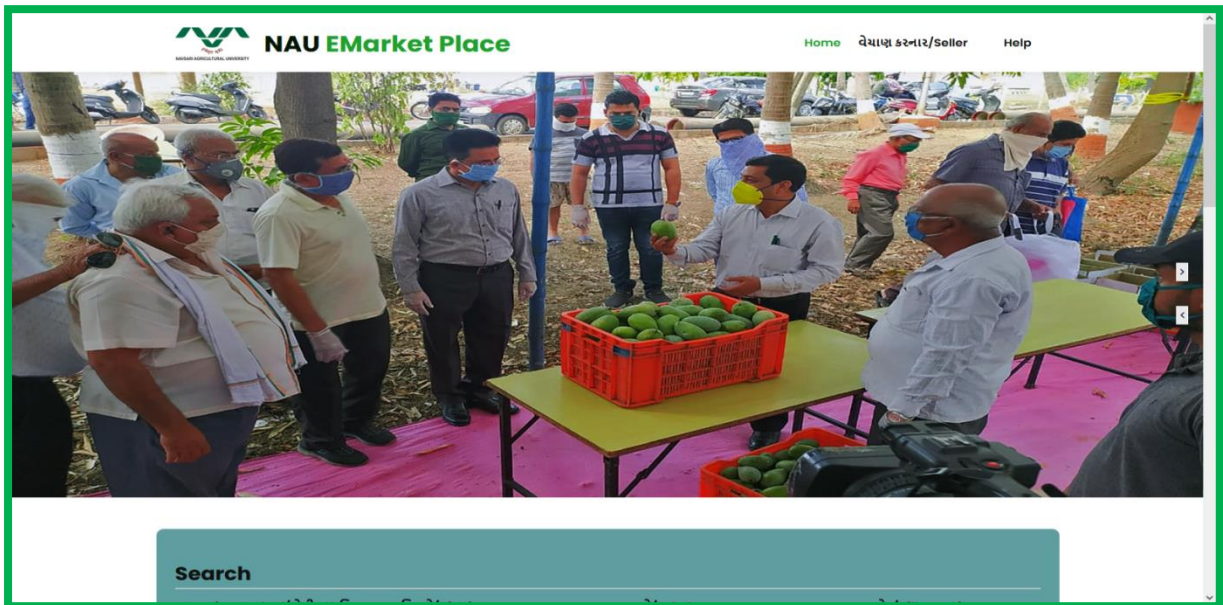
## 2. E-Shop portal.

**NAU-EShop** is a dedicated portal for easily linking buyers, farmers, and agricultural products. Farmers will no longer be required to physically visit various university centres to fill out forms and purchase merchandise (plants & other Products) through the **NAU-EShop** portal.



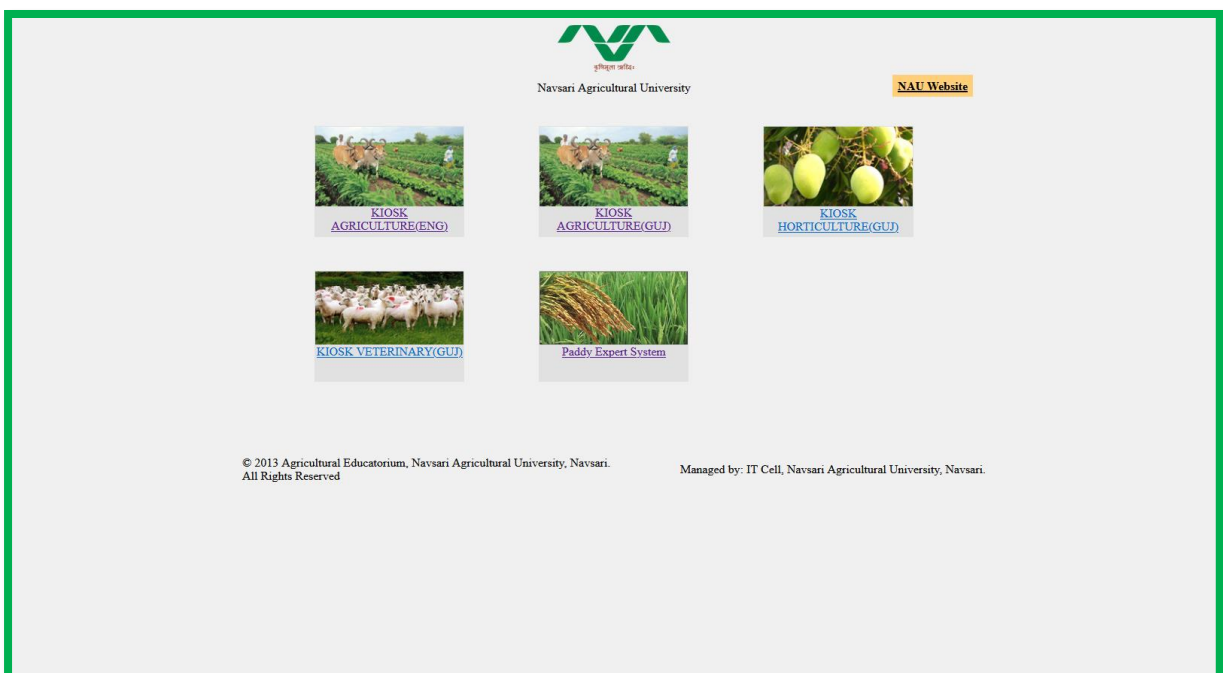
### 3. E-Market portal.

**NAU-EMarket** place is a dedicated online marketplace that connects buyers and sellers/farmers. Farmers that want to sell their products can list them and purchasers can contact them directly to purchase their items.



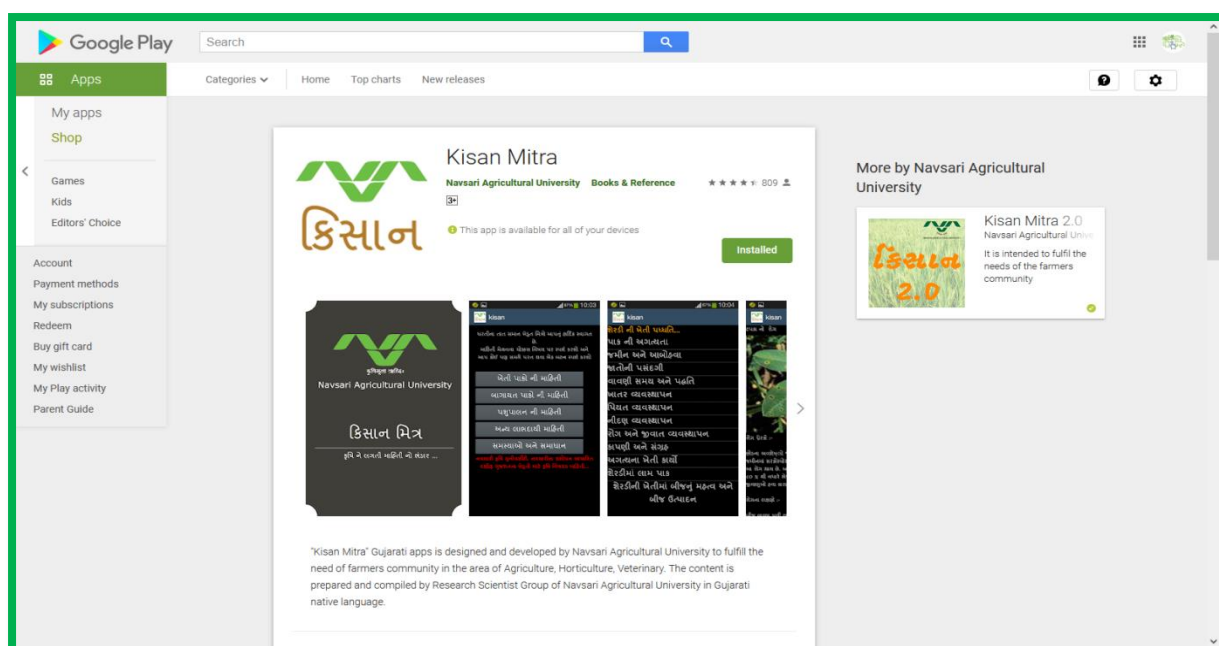
### 4. Krishi KIOSK portal.

IT Cell NAU is managing and maintaining Krishi KIOSKs (agriculture English, agriculture Gujarati, Horticulture Gujarati, veterinary Gujarati) at the University.



## 5. Kisan Mitra mobile app 1.0 & 2.0.

"Kisan Mitra" Gujarati app is designed and developed by Navsari Agricultural University to fulfil the need of the farmers' community in the area of Agriculture, Horticulture, and Veterinary. The content is prepared and compiled by the Research Scientist Group of Navsari Agricultural University in Gujarati's native language.



## 6. Sugarcane Expert System.

NAU's Information Technology Cell is managing and maintaining an online Sugarcane Expert System established with the assistance of the Department of Extension Education, NMCA, Navsari.





# Activities & Services provided by IT Department for Research Works



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# Activities & Services provided by IT Department for Research Works

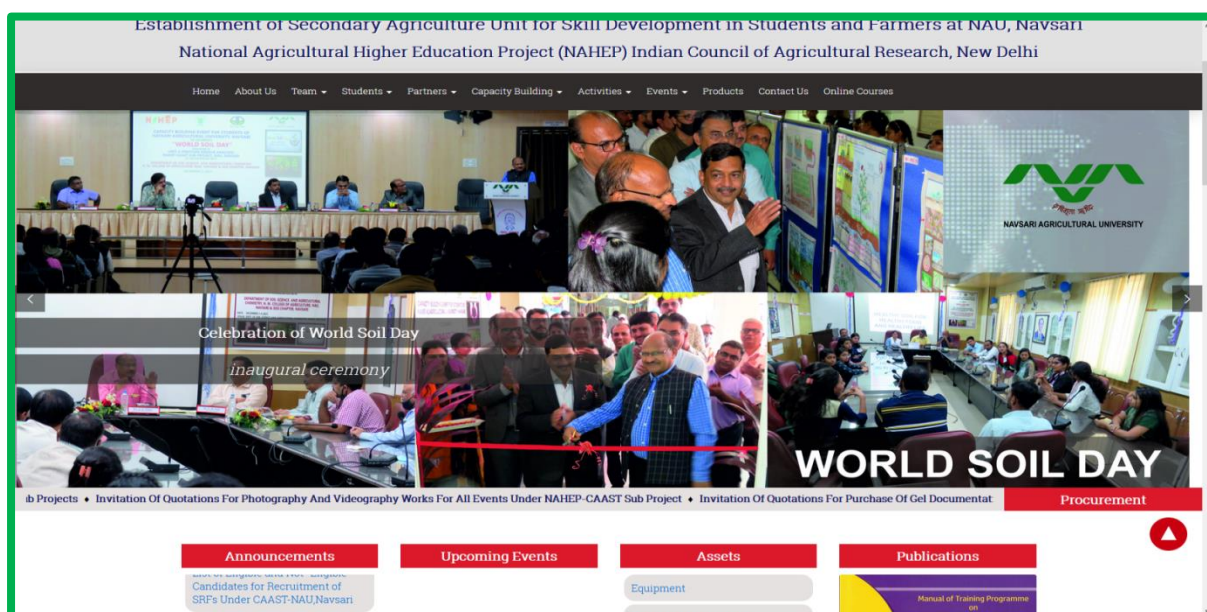
## 1. Agricultural Experiment Monitoring System

The Information Technology Cell the NAU Agricultural Experiment Monitoring System is being managed and maintained by NAU to store, track, and generate reports based on data provided by NAU Agricultural scientists.



## 2. Procurement & Deployment of NAU NAHEP-CAAST website

The NAHEP-CAAST website is in-house hosted, managed and maintained by the NAU Information Technology Cell.



➤ **Thank You** ➤